



Reducing Risk Offshore: Safe and Environmentally Responsible Operations

Lars Herbst, Gulf of Mexico OCS Region

Agenda



- About the Bureau of Safety and Environmental Enforcement
- Laws and Regulations
- BSEE's Touch Points for Safety - Life Cycle of Exploration, Development and Production Project
- Lessons Learned and Integrated
- Technology and Looking toward the Future

About BSEE



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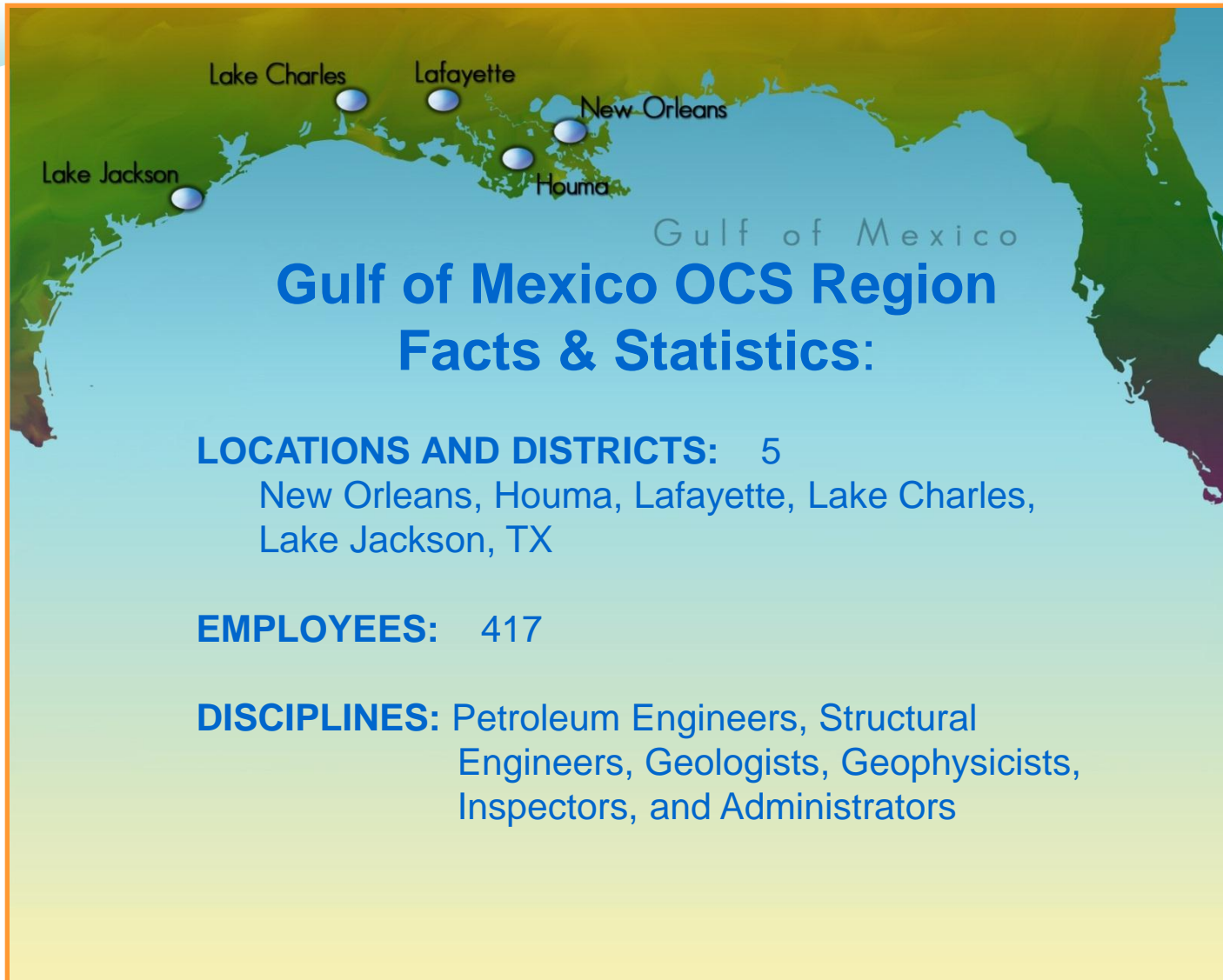


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Herndon, VA 20170

About the Region



Gulf of Mexico OCS Region Facts & Statistics:

LOCATIONS AND DISTRICTS: 5

New Orleans, Houma, Lafayette, Lake Charles,
Lake Jackson, TX

EMPLOYEES: 417

DISCIPLINES: Petroleum Engineers, Structural
Engineers, Geologists, Geophysicists,
Inspectors, and Administrators

Drilling Rigs Working in U.S. Gulf of Mexico



Platform Rig = 15



Semi-submersible = 13



Drillship = 23



Jack-up rig = 19

Production Facilities



**Shallow Water
Production Facilities**
(less than 500 ft)

2528



**Deepwater
Production Facilities**
(greater than 500 ft)

74

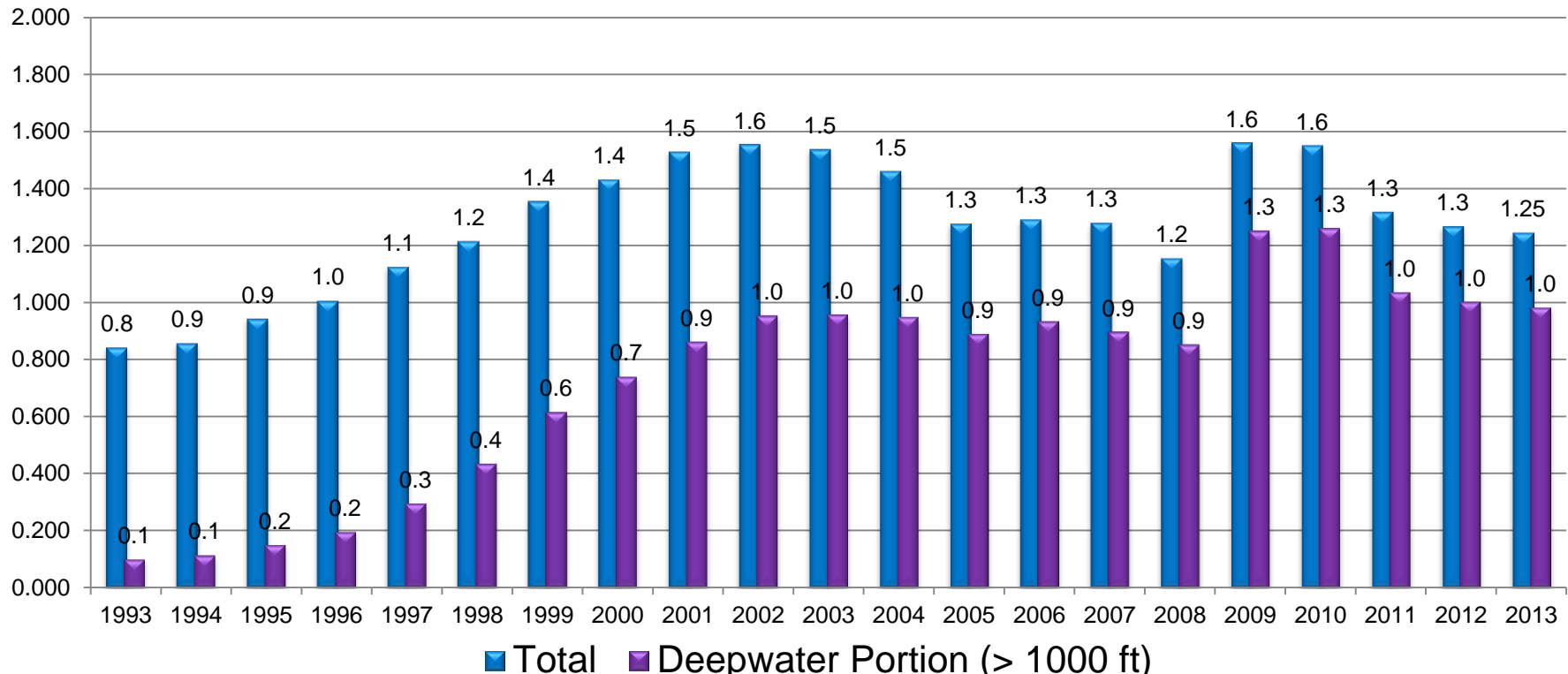


Associated Miles of Regulated Pipelines – 26,123

Gulf of Mexico OCS Oil Production Total vs. Deepwater

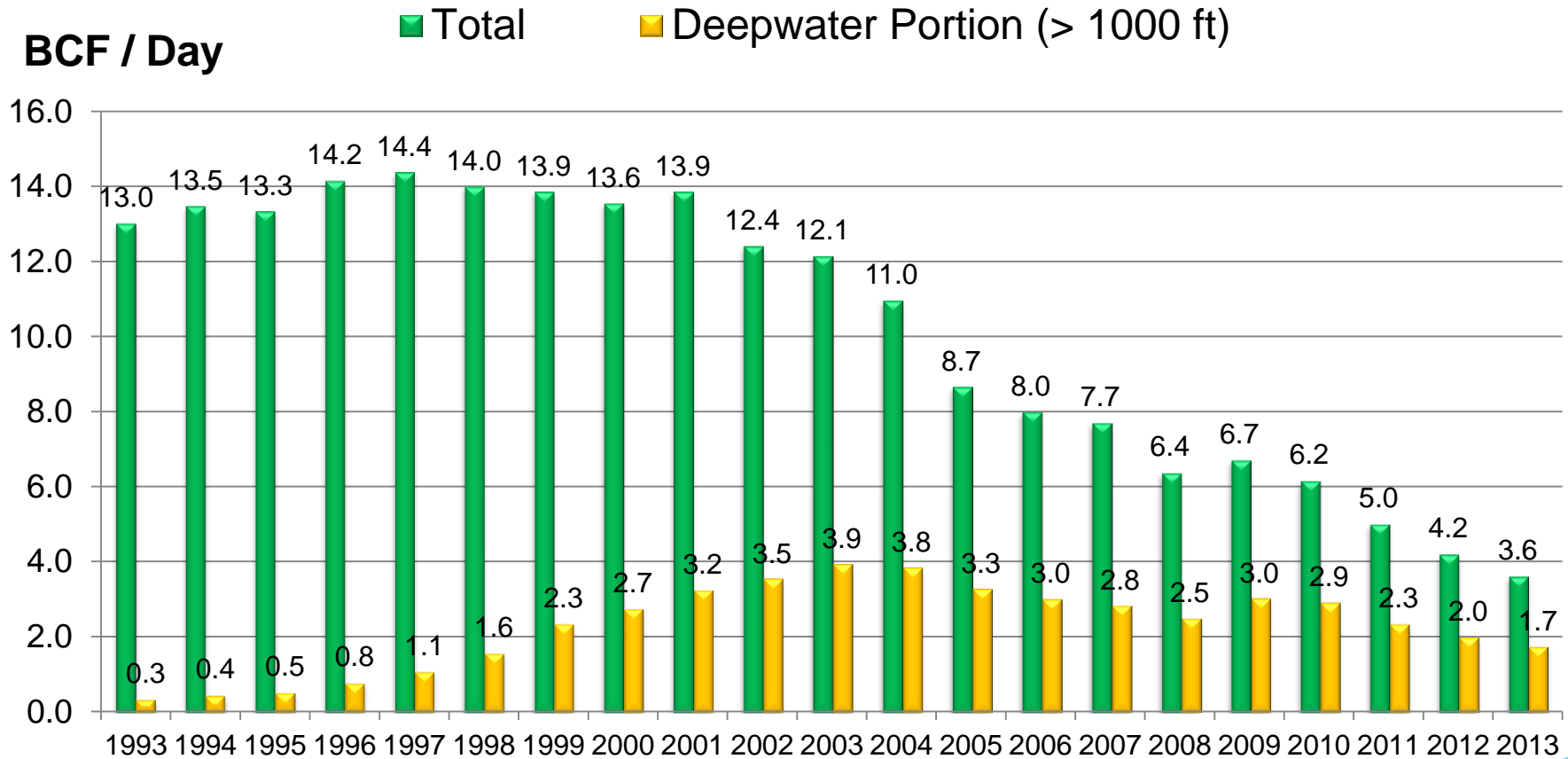


MM Bbls /Day



Approximate Annual Production – 459 million barrels

Gulf of Mexico OCS Gas Production Total vs. Deepwater



Approximate Annual Production – 1,328 trillion cubic feet

OCS Lands Act



- The *Outer Continental Shelf Lands Act* (OCSLA), created on August 7, 1953, defines the OCS as all submerged lands lying seaward of state coastal waters (3 miles offshore) which are under U.S. jurisdiction.
- Under the OCSLA, the Secretary of the Interior is responsible for the administration of mineral exploration and development of the OCS.
- The Act, as amended, provides guidelines for implementing an OCS oil and gas exploration and development program.

Code of Federal Regulations



- The Code of Federal Regulations (CFR) contains general and permanent rules. It is divided into 50 titles that represent broad areas subject to Federal regulation.
- Regulations enforced by BSEE are contained in Title 30, Chapter II. Each title is divided into chapters and each chapter is further subdivided into parts and subparts that cover specific regulatory areas.



BSEE's Touchpoints for Safety



Permits

- Drilling
 - Shallow hazards
 - Well and casing design
 - Well screening tool
 - Subsea containment plan
- Production
 - Completions and workovers
 - Structure design and Installation
 - Platform Verification Program
 - Production Safety System approvals

Inspections

- Drilling
 - Rig pre-spud inspections
 - BOP witnessing
 - Monthly inspections
 - Unannounced spill response drills
- Production
 - Pre-production Inspections
 - Annual inspections
 - Site-specific completions and workover inspections
 - Unannounced spill response drills

BSEE's Touchpoints for Safety



Permits

- Pipelines
 - Pipeline design and installation
 - Repairs and modifications
- Decommissioning
 - Well abandonment
 - Structure removal plan approvals

Inspections

- Pipelines
 - Installation inspections
 - Repairs inspections
- Decommissioning
 - Well abandonment inspections
 - Site clearance surveys
 - On-site observer

Lessons Learned



From Deepwater Horizon

- **Drilling Safety Rule**
 - well bore integrity and well control equipment and procedures, including blowout preventers.
 - requirement for independent third-party inspection and certification of the proposed drilling process.
 - certification by Professional Engineer that blowout preventers meet new standards for testing and maintenance and are capable of severing the drill pipe under anticipated well pressures
- **Workplace Safety Rule**
 - Identification of hazards and the mitigation through hazards analysis and job safety analysis
 - Operator responsible for the management and implementation of SEMS on any facility whether operated by operator or contractor.

Lessons Learned, cont'd



From Deepwater Horizon

- Subsea Containment
 - Subsea containment capability demonstration
 - Well Containment Screening Tool
- Proposed Well Control rulemaking
 - Addresses systematic approach to all aspects of well control
 - Input was received from many stakeholders and interested parties
 - Opportunity for public comment through formal rulemaking process

As Technology Advances



- **High Pressure High Temperature**
- **Dual Gradient Drilling/Managed Pressure Drilling**
- **Blowout Preventer advancements**
- **Subsea Well Intervention**
- **Subsea Decommissioning**

As Technology Advances



Deepwater Operations Plan (DWOP)

- **30 CFR 250.287** - All projects in the Gulf of Mexico (GOM) using non-conventional production or completion technology require a Deepwater Operations Plan Subsea
- **30 CFR 250.292 - New Technologies** must be included in an operator's DWOP application.

Looking to the Future



- Program-wide Initiatives
 - Inspections and Enforcement efforts
 - BOP test witnessing
 - Increased inspection force and helicopter fleet
 - eInspections
 - National Offshore Training Center
 - Engineering Technology Assessment Center (ETAC)

Looking to the Future



- Increased drilling activity
 - Industry mastering enhanced information requirements for APDs
 - Increased coordination with USCG

Looking to the Future



- Production Projects Start-ups
 - Pre-production Inspections
 - New and emerging technologies
 - Review of Deepwater Operation Plans (DWOPs)
 - Decommissioning of subsea and deepwater structures, i.e. Spars & TLPs



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